

Division of Solid and Hazardous Waste
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SOLID WASTE FACILITY PERMIT

Under the provisions of N.J.S.A. 13:1E-1 *et seq.* known as the Solid Waste Management Act, this permit is hereby issued to:

MORRISTOWN MEMORIAL HOSPITAL

Facility Type:	Small-scale Thermal Destruction Facility
Lot No.:	1.00, 1.01, 1.02
Block No.:	4201
Municipality:	Morristown
County:	Morris
Facility Registration No.:	14240001049

This permit is subject to compliance with all conditions specified herein and all regulations promulgated by the Department of Environmental Protection.

This permit shall not prejudice any claim the State may have to riparian land, nor does it allow the permittee to fill or alter or allow to be filled or altered in any way, lands that are deemed to be riparian, wetlands, stream encroachment areas or flood plains, or that are within the Coastal Area Facility Review Act (CAFRA) zone or are subject to the Pinelands Protection Act of 1979, nor shall it allow the discharge of pollutants to waters of this State without prior acquisition of the necessary grants, permits, or approvals from the Department of Environmental Protection.

February 5, 2002
Issuance Date

July 24, 2006
Expiration Date

Signed by Thomas Sherman, Assistant Director
Thomas Sherman, Assistant Director
Office of Permitting & Technical Programs

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Scope of Permit

This Permit, along with the referenced application documents herein specified, shall constitute the sole Solid Waste Facility Permit for the operation of a small-scale thermal destruction facility by Morristown Memorial Hospital located in Morristown, Morris County, New Jersey. The Solid Waste Facility Permit is a permit renewal to the original Solid Waste Facility Permit issued to Morristown Memorial Hospital on July 24, 1991. Any registration, approval or permit previously issued to by the Division of Solid and Hazardous Waste or its predecessor agencies is hereby superseded.

This Permit does not convey any property rights of any sort, or any exclusive privilege. Failure to comply with all the conditions specified herein may result in revocation of this Permit and/or may result in such other regulatory or legal actions which the Department is authorized by law to institute.

Regulated Activities at the Facility

Section I of this Permit contains the general conditions applicable to all solid waste facilities. Section II of this Permit contains general operating requirements for all small-scale thermal destruction facilities that receive, store, process or transfer solid waste and regulated medical waste materials. Section III of this Permit contains specific conditions applicable to the operations of this facility.

Facility Description

The permitted facility is a privately owned thermal destruction unit operated by Morristown Memorial Hospital. The facility is operated for the sole purpose of disposing of select waste materials generated by Morristown Memorial Hospital in the delivery of health care services to the community. The thermal destruction unit is housed within the incinerator building of the main Morristown Memorial Hospital (MMH) campus located on Madison Avenue in the municipality of Morristown, Lots 1.00, 1.01 and 1.02, Block 4201, in the County of Morris.

The facility is authorized to accept and process Municipal Waste Type #10 (exclusively the institutional subcategory of this waste type) and Regulated Medical Waste (RMW), Classes 1, 2, 3, 4, 5, 6 and 7. The facility is authorized to operate twenty-four hours daily, seven days per week. The facility is restricted to combusting a maximum of 780 pounds per hour of any combination of waste types authorized for processing.

Morristown Memorial Hospital operates two campuses, both of which are located within the municipality of Morristown and both of which contribute to the waste stream processed by the incinerator. The twenty-seven acre MMH Madison Avenue campus, host to the thermal destruction unit and having a 546-bed capacity, is the larger of the two campuses. The smaller Mount Kemble campus is located on a separate ten-acre site and is licensed for 140 patient beds. All waste generated at either of the two campuses is secured at its point of origin and is subsequently transported and handled in an environmentally sound manner. The RMW waste stream is placed in color-coded and labeled "red bags", which are subsequently sealed and placed

into designated pickup rooms within the hospital proper. Packaged RMW is collected from the pickup rooms and is placed into hand carts that provide in-house transport to each campus's secured waste receiving/holding area. Waste from the Mount Kemble campus facility is then transported by a registered RMW hauler to the MMH Madison Avenue campus incinerator where it joins the Madison Avenue campus waste staged in the incinerator building's waste receiving/handling area. RMW truck deliveries are through the Madison Avenue entrance onto East Drive. The Mount Kemble campus contributes one vehicle trip load of waste daily to the incinerator.

Hospital waste staged at the incinerator facility that cannot be combusted within twenty-four hours is subject to removal from the site for alternative disposal offsite. The offsite disposal option is provided for through contractual agreement with a registered RMW hauler.

Waste is charged to a dual chambered, controlled air, gas fired incinerator equipped with a PLC based control system. The primary combustion chamber is a rotary kiln design operating at temperatures in excess of 1400^o Fahrenheit (F). Off-gases generated by the combustion of the waste exit the primary chamber and undergo further combustion in the secondary chamber, which provides a minimum of one-second-residence exposure at temperatures in excess of 1800^o F. Flue gases are subsequently passed through a heat recovery boiler, producing 5,000 pounds of steam per hour used to supplement production from the adjacent hospital boiler plant. The cooled flue gas is then passed through a spray dryer absorber (SDA) to control acid gases, followed by passage through a baghouse to remove entrained particulates, before the flue gas is discharged to the atmosphere via the system flue (which shares a stack in common with the hospital's utility boilers). Unique to the small-scale incinerator facilities, this unit is also equipped to inject activated carbon into the feed of the SDA to control mercury emissions

The thermal destruction unit does not produce a process wastewater, although approximately 120 gallons per day of water is used to washdown the facility physical plant and equipment. The washdown wastewater is discharged to the public sewer system.

Ash from the facility is collected and handled as two separate and distinct residue streams. The first of these streams is the bottom ash, made up of predominantly that material that remains in the primary chamber after combustion is completed. The fly ash constitutes the second ash stream, consisting of the solid residue removed from the facility flue gas through the action of the air pollution control equipment.

Bottom ash exits the rotary kiln falling into a connecting container positioned below the primary chamber. An automated system sprays water on to the discharged ash in proportion to the amount of waste being fed into the primary chamber by the unit's ram feeder. Once the discharged ash has cooled (for a minimum 24-hour period and maximum 48 hour period), the ash is manually shoveled from the receiving container into lined corrugated boxes, which are sealed and labeled upon filling. The boxed bottom ash is then stored on a pallet within the incinerator building until the pallet is filled. The pallet is then moved to the courtyard bottom ash roll-off container using a pallet jack. The bottom ash roll-off is equipped with a swing door allowing the delivery of the pallet and it's contents directly into the roll-off, after which it is secured awaiting removal from the site for disposal. Operating records show that typically four boxes of bottom ash are generated during a twenty-four operating day, weighing between 400 and 900 pounds in total.

The fly ash from the facility is handled in a manner similar to that of the bottom ash. The fly ash, however, is directly deposited into the lined corrugated box containers. Once these are filled, they too are sealed and labeled and placed on a pallet to await removal to an exterior courtyard roll-off container. The facility operator maintains two separate roll-off containers servicing each ash stream individually. Facility operating records would indicate that during a typical 24-hour operating period between 600 and 900 pounds of fly ash is produced.

The fly ash and bottom ash streams generated at the facility are subject to separate sampling and analytical procedures. The analytical results are used to classify the residue based on its hazardous/non-hazardous analytical characteristics. Ash disposal is conducted in accordance with this classification as well as with the dictates of the Morris County District Solid Waste Management Plan.

Section I - General Conditions Applicable to All Permits

1. Duty to Comply

- (a) Pursuant to N.J.A.C. 7:26-2.8(i), the permittee shall operate the facility in compliance with the requirements of N.J.A.C. 7:26-2.11.
- (b) Pursuant to N.J.A.C. 7:26-2.8(j), the permittee shall operate the facility in conformance with all of the conditions, restrictions, requirements and any other provisions set forth in this permit.
- (c) Pursuant to N.J.A.C. 7:26-2.8(k), except for minor modifications as set forth at N.J.A.C. 7:26-2.6(d), the permittee shall not modify, revise or otherwise change any condition of this permit without prior written approval of the Department.

2. Duty to Reapply

- (a) Pursuant to N.J.A.C. 7:26-2.7(b)1, if the permittee wishes to continue the operation of this facility after the expiration date of this permit, the permittee shall apply for permit renewal at least 90 days prior to the expiration date of this permit, and the facility must be included in the District Solid Waste Management Plan at the time of such application.
- (b) Pursuant to N.J.A.C. 7:26-2.7(c), the conditions of this permit shall continue in force beyond the expiration date of this permit pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-11, until the effective date of a new permit if:
 - (1) The permittee has submitted a timely and complete application for a renewal permit pursuant to (a) above; and
 - (2) The Department, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of this permit, due to time or resource constraints.
- (c) Pursuant to N.J.A.C. 7:26-2.7(d), permits continued under said section remain fully effective and enforceable, and if the permittee is not in compliance with any one of the conditions of the expiring or expired permit the Department may choose to do any or all of the following:
 - (1) Initiate enforcement action based on the permit which has been continued;
 - (2) Issue a notice of intent to deny the new permit under N.J.A.C. 7:26-2.4. If the permit is denied, the permittee would then be required to cease activities and operations authorized by the continued permit or be subject to an enforcement action for operating without a permit;
 - (3) Issue a new permit under N.J.A.C. 7:26-2.4 with appropriate conditions; or

- (4) Take such other actions as are authorized by N.J.A.C. 7:26-1 *et seq.* or the Solid Waste Management Act, N.J.S.A. 13:1E-1 *et seq.*

3. Need to Mitigate

- (a) Pursuant to N.J.A.C. 7:26-2.8(p), should the Department determine that the facility is operating in an environmentally unsound manner, the permittee shall:
 - (1) Within 90 days of notification by the Department, submit a plan to close or environmentally upgrade the facility in conformance with the applicable standards, as determined by the Department and set forth in N.J.A.C. 7:26-1 *et seq.*;
 - (2) Within 90 days of receipt of written approval by the Department of the submitted plan, begin to close or construct the environmental upgrading at the facility; and
 - (3) Within one year of receipt of written approval by the Department of the submitted plan, complete closure or construction of the environmental upgrading at the facility.
- (b) Pursuant to N.J.A.C. 7:26-2.8(q), a one time extension of the compliance schedule established by N.J.A.C. 7:26-2.8(p) shall be granted by the Department provided the permittee demonstrates that it has made a good faith effort to meet the schedule.
- (c) Pursuant to N.J.A.C. 7:26-2.8(r), should the environmental upgrading required pursuant to N.J.A.C. 7:26-2.8(p) not be completed or should continued operations be determined by the Department to be environmentally unsound despite the implementation of the plan approved pursuant to N.J.A.C. 7:26-2.8(p), the facility shall temporarily or permanently cease operations and close or enter into receivership, as provided for in N.J.S.A. 13:1E-9, for that period of time necessary to rectify the environmentally unsound conditions.

4. Permit Actions

- (a) Pursuant to N.J.A.C. 7:26-2.6(a)1, if cause exists, the Department may modify, or revoke and reissue this permit, subject to the limitations of that section, and may require the permittee to submit an updated or new application in accordance with N.J.A.C. 7:26-2.6(e), if appropriate.
- (b) Pursuant to N.J.A.C. 7:26-2.6(b), the Department may modify or, alternatively, revoke and reissue this permit if cause exists for termination under N.J.A.C. 7:26-2.6(c) and the Department determines that modification or revocation and reissuance is appropriate.
- (c) Pursuant to N.J.A.C. 7:26-2.6(d), upon the request of the permittee, an interested party or for good cause, the Department may make certain minor modifications to a permit without issuing a tentative approval, providing public notice thereof or holding a public

hearing thereon.

- (d) Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit such facts or information.

5. Signatory Requirements

- (a) All completed registration statements submitted by the permittee shall be signed as specified at N.J.A.C. 7:26-2.4(e)1.
- (b) All engineering designs and reports, the environmental and health impact statement, other information requested as "Addendums" by the Department pursuant to N.J.A.C. 7:26-2.4(f) and (g)4 and documents required to be submitted pursuant to N.J.A.C. 7:26-2.9 and 2.10, submitted on behalf of the permittee, shall be signed by a person described in N.J.A.C. 7:26-2.4(e)1 or by a duly authorized representative of that person, as specified at N.J.A.C. 7:26-2.4(e)2.
- (c) Any person signing a registration statement, engineering design or report, environmental and health impact statement or addendum mentioned in N.J.A.C. 7:26-2.4(e)1 or (e)2, submitted on behalf of the permittee, shall make the certification specified at N.J.A.C. 7:26-2.4(e)3.

6. Transfers

- (a) Pursuant to N.J.A.C. 7:26-2.8(l), the permittee shall not transfer ownership of the permit without receiving prior written approval of the Department, in accordance with N.J.A.C. 7:26-2.7(e).
- (b) Pursuant to N.J.A.C. 7:26-2.7(e)1, a written request for permission to allow any transfer of ownership or operational control of the facility must be received by the Department at least 180 days in advance of the proposed transfer. The request for approval shall include the following:
 - (1) A registration statement, completed by the prospective new permittee on forms provided by the Department;
 - (2) A disclosure statement as required by N.J.A.C. 7:26-16.4 completed by the proposed transferee;
 - (3) A written agreement between the permittee and the proposed new permittee containing a specific future date for transfer of ownership or operations.
- (c) Pursuant to N.J.A.C. 7:26-2.7(e)2, a new owner or operator may commence operations at the facility only after the existing permit has been revoked and a permit is issued pursuant to N.J.A.C. 7:26-2.4.
- (d) Pursuant to N.J.A.C. 7:26-2.7(e)3, the permittee of record remains liable for ensuring

compliance with all conditions of the permit unless and until the existing permit is revoked and a new permit is issued in the name of the new owner or operator.

- (e) Pursuant to N.J.A.C. 7:26-2.7(e)4, compliance with the transfer requirements set forth in that subsection shall not relieve the permittee from the separate responsibility of providing notice of such transfer pursuant to the requirements of any other statutory or regulatory provision.

7. Registration Statement

- (a) Pursuant to N.J.A.C. 7:26-2.8(b), prior to May 1 of each calendar year the permittee shall submit to the Department a statement updating the information contained in the permittee's initial registration statement. This update shall be on forms furnished by the Department. In no case shall submission of an updated statement alter conditions of this permit.
- (b) Pursuant to N.J.A.C. 7:26-2.8(c), the permittee shall notify the Department in writing within 30 days of any change in the information set forth in the permittee's current registration statement.
- (c) Pursuant to N.J.A.C. 7:26-2.8(d), failure of the permittee to submit an updated registration statement and to submit all applicable fees, required by N.J.A.C. 7:26-4, on or before July 1 of each calendar year shall be sufficient cause for the Department to revoke this permit or take such other enforcement action as is appropriate.

8. Operating Record and Reporting Requirements

- (a) The permittee shall maintain a daily record of wastes received. The record shall include the information specified at N.J.A.C. 7:26-2.13(a).
- (b) The daily record shall be maintained, shall be kept, and shall be available for inspection in accordance with N.J.A.C. 7:26-2.13(b).
- (c) The permittee shall submit monthly summaries of wastes received to the Division of Solid and Hazardous Waste, Bureau of Recycling and Planning and the Solid Waste Coordinator for the Morris County District, on forms provided by the Department (or duplication of same), no later than 20 days after the last day of each month. The monthly summaries shall include the information specified at N.J.A.C. 7:26-2.13(e).
- (d) Pursuant to N.J.A.C. 7:26-6.4, upon request by the Department, the permittee shall submit, in such form as the Department may deem appropriate, information concerning the sources of wastes received and the transportation or disposal patterns associated with such wastes.

9. Conformance to the District Solid Waste Management Plan

Pursuant to N.J.A.C. 7:26-6.12(b), the permittee shall operate the facility in compliance with any applicable district solid waste management plan(s) as well as any amendments to and/or approved administrative actions concerning such plan(s). Should the permittee fail to comply with any applicable district solid waste management plan(s) as well as any amendment to or approved administrative actions concerning such plan(s), the permittee shall be deemed in violation of N.J.S.A. 13:1E-1 *et seq.* and N.J.A.C. 7:26-1 *et seq.* and shall be subject to applicable penalties provided thereunder, and any other applicable laws or regulations.

10. Compliance with Other State Regulations and Statutes

Pursuant to N.J.A.C. 7:26-2.8(h), the issuance of this permit shall not exempt the permittee from obtaining all other permits or approvals required by law or regulations.

End of Section I

Section II - General Operating Requirements

1. General Operating Requirements for Solid Waste Facilities Disposing of On-site Generated Waste

Pursuant to N.J.A.C. 7:26-2.11, the facility must be operated in compliance with the following general operating requirements:

- (a) Within each 24-hour period the operator shall clean each area where waste has been deposited or stored, except for those storage areas that are designed for multiple day storage.
- (b) No waste shall be stored overnight at the facility without effective treatment to prevent odors associated with putrefaction.
- (c) Facility property surrounding the actual disposal area shall be maintained free of litter, debris, and accumulations of unprocessed waste, process residues and effluents. Methods of effectively controlling wind-blown papers and other lightweight materials such as fencing shall be implemented at the facility.
- (d) Methods of effectively controlling dust shall be implemented at the facility in order to prevent offsite migration.
- (e) The operation of the facility shall not result in the emission of air contaminants in violation of N.J.A.C. 7:27-5.2(a).
- (f) The operator shall maintain all facility systems and related appurtenances in a manner that facilitates proper operation and minimizes system downtime. When requested, the operator of the facility shall furnish proof that provisions have been made for the repair and replacement of equipment which becomes inoperative.
- (g) An adequate water supply and adequate fire-fighting equipment shall be maintained at the facility or be readily available to extinguish any and all types of fires. Fire-fighting procedures as delineated in the approved O and M manual, including the telephone numbers of local fire, police, ambulance and hospital facilities, shall be posted in and around the facility at all times.
- (h) The operator shall effectively control insects, other arthropods and rodents at the facility by means of a program in compliance with the requirements of the New Jersey Pesticide Control Code, N.J.A.C. 7:30, and implemented by an applicator of pesticides, certified in accordance with the New Jersey Pesticide Control Code, N.J.A.C. 7:30.
- (i) The operator shall at all times comply with the conditions of this permit, as well as all other permits or certificates required and issued by the Department or any other governmental agency. The operator shall not receive, store, handle, process or dispose of waste types not specifically identified in Section III of this permit or other permit or certificate issued by the Department.

- (j) Departmental inspectors shall have the right to enter and inspect any building or other portion of the facility, at any time. This right to inspect includes, but is not limited to:
 - (1) Sampling any materials on site;
 - (2) Photographing any portion of the facility;
 - (3) Investigating an actual or suspected source of pollution of the environment;
 - (4) Ascertaining compliance or non-compliance with any statutes, rules, or regulations of the Department, including conditions of the SWF permit or other permit or certificate issued by the Department; or
 - (5) Reviewing and copying all applicable records, which shall be furnished upon request and made available at all reasonable times for inspection.
- (k) The quantity of waste received by the facility operator shall not exceed the system's designed handling, storage, processing or disposal capacity as identified in Section III of this permit or other permit certificate. The designed processing and disposal capacity approved within this permit, or any other permit certificate or approval conditions shall be inclusive of all solid waste received at the facility as well as all source separated recyclables received.
- (l) The facility shall be operated in a manner that employs the use of the equipment and those techniques for the receipt, storage, handling, processing or disposal of incoming waste and process residues that are specifically authorized by this permit.
- (m) The approved final O and M manual shall be maintained at the facility. A written description of any proposed changes to the approved, final O and M manual shall be submitted to the Department for review. These proposed changes shall not be implemented at the facility until the Department approves the changes.

2. General Operating Requirements for Small-scale Thermal Destruction Facilities

Pursuant to N.J.A.C. 7:26-2B.8, the facility must be operated in compliance with the following general operating requirements:

- (a) The owner or operator shall conduct inspections as indicated in the approved final O and M manual in order to identify and remedy any problems.
- (b) The owner and/or operator shall record the results of the inspections in a log book or by means of an electronic storage system approved by the Department which shall be accessible at the facility at all times for inspection by the Department. These records shall include the date and time of the inspection, the name of the inspector, a notation of observations and recommendations and the date and nature of any repairs or other remedial actions taken.
- (c) The owner or operator shall implement a program that effectively prevents the acceptance of unauthorized waste types. This program shall be incorporated into the approved final O and M manual.
- (d) Should situations arise where the facility experiences equipment or system malfunction to the extent that the waste received cannot be handled or processed in the normal manner, as specified in this permit, then the operator shall notify the Department of the existence of such a situation and the circumstances contributing to the situation within the working day of its occurrence. The operator shall immediately pursue corrective measures. The continued receipt of wastes at the facility shall be limited to that quantity and type that can be handled, stored and processed in conformance with the facility's remaining approved operational capacity.
- (e) Arrangements for facility generated waste disposal shall be established and maintained throughout the life of the facility. These waste disposal arrangements shall be in conformance with the Solid Waste Management Plan of the District in which the facility is located and with the rules of the Department.
- (f) Unprocessed incoming waste, facility process waste residues and effluents, and recovered materials shall be stored in bunkers, pits, bins, or similar containment vessels and shall be kept at all times at levels that prevent spillage or overflow.
- (g) Samples and measurements taken for the purpose of monitoring facility process and treatment operations shall be representative of the process or operation and shall be performed in accordance with the conditions of this permit, as well as the requirements of other regulatory agencies where applicable. Monitoring shall be conducted through the use of continuous monitoring instrumentation, where feasible.
- (h) Prior to disposal, the owner and/or operator shall perform a waste determination on all residual ash, in accordance with N.J.A.C. 7:26G-6. Such determination shall be based on analyses of representative composite samples collected in the manner

specified in Section III of this permit. At a minimum the sampling shall include analyses for toxicity characteristics and total TCDDs (all tetrachlorodibenzo-p-dioxins), and shall be performed at the frequency specified in Section III of this permit.

- (i) The Department may alter the list of ash test parameters, the methods of sample collection, the analytical procedures employed and the frequency of sampling and analysis, as it deems is necessary. The permittee may request the Department to reduce the number of ash test parameters specified within Section III of this permit by applying qualitative knowledge of incoming waste streams. If the owner and/or operator demonstrates through testing that the concentration of any given parameter is consistently below method detection levels as determined using the Toxicity Characteristic Leaching Procedure (TCLP), as defined in USEPA's Test Methods for Evaluating Solid Waste-Physical/Chemical Methods SW-846 (SW-846), or the concentration of any given parameter as determined using a total metals analysis, as defined in SW-846, is consistently below 20 times the regulatory threshold levels of the TCLP, the permittee may request the Department to eliminate those parameters from subsequent analysis.
- (j) The analyses required by (h) and (i) above shall be performed in accordance with procedures outlined in the most recent edition of "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods," U.S.E.P.A. publication SW-846.
- (k) The results of ash analysis, including the statistical evaluation of the analytical data conducted in accordance with SW 846, and related quality assessment and quality control information pertaining to sample collection, handling and laboratory analytical methodology, shall be submitted to the Department for evaluation. The owner and/or operator shall dispose of the onsite generated residual ash at a facility authorized and permitted to receive the waste type I.D. number assigned to the residual ash by the Department in accordance with its classification.
- (l) The operator shall retain original records of all waste analyses and operations' monitoring reports at the facility for a period of three years from the date of measurement.
- (m) Records of operations' monitoring and waste analyses required above shall include:
 - (1) The date, time and place of sampling, measurement or analysis;
 - (2) Chain of custody for all samples collected;
 - (3) The name of the individual who performed the sampling, measurement or analysis;
 - (4) The sampling and analytical methods including the minimum detection levels for the analytical procedure utilized;
 - (5) The results of such sampling, measurement or analyses; and
 - (6) The signature and certification of the report by an appropriate authorized agent for the facility.
- (n) The owner and/or operator shall act to prevent accidental or unintentional entry and

minimize the possibility for unauthorized entry into the facility. The facility shall have a 24-hour surveillance system which continuously monitors and controls entry to the facility or an artificial or natural barrier which completely surrounds the facility. In addition, the facility shall have a means to control entry at all times through the gates or other entrances to the facility.

- (o) The owner and/or operator shall comply with the following requirements pertaining to facility staffing:
 - (1) Facilities shall maintain sufficient personnel during each scheduled shift to assure the proper and orderly operation of all system components, along with the ability to handle all routine facility maintenance requirements. Such personnel shall have sufficient educational background, employment experience and/or training to enable them to perform their duties in such a manner as to ensure the facility's compliance with the requirements of the Solid Waste Management Act at N.J.S.A. 13:1E, N.J.A.C. 7:26-1 *et seq.*, and the conditions of this permit;
 - (2) Each shift shall have a designated shift supervisor authorized by the owner or operator to direct and implement all operational decisions during that shift; and
 - (3) A facility utilizing a boiler to generate steam, power or heat shall employ individuals licensed in accordance with the Rules and Regulations of the New Jersey Department of Labor, "Boilers, Pressure Vessels and Refrigeration," N.J.A.C. 12:90.
- (p) The owner and/or operator shall comply with the following requirements pertaining to facility personnel training:
 - (1) All personnel who are directly involved in facility waste management activities or who operate, service, or monitor any facility equipment, machinery or systems shall successfully complete an initial program of classroom instruction and on-the-job training that includes instruction in the operation and maintenance of the equipment, machinery and systems which they must operate, service or monitor in the course of their daily job duties, and which teaches them to perform their duties in a manner that ensures the facility's compliance with the requirements of the Solid Waste Management Act at N.J.S.A. 13:1E, N.J.A.C. 7:26-1 *et seq.* and the conditions of this permit;
 - (2) The training program shall be directed by a person thoroughly familiar with the technology being utilized at the facility and the conditions of the facility's permits;
 - (3) The training program shall ensure that facility personnel are able to effectively respond to any equipment malfunction or emergency situation that may arise. The training program shall provide instruction in the use of

personal safety equipment, procedures for inspecting and repairing facility equipment, the use of communications or alarm systems, the procedures to be followed in response to fires, explosions or other emergencies, and the procedures to be followed during planned or unplanned shutdown of operations;

- (4) Employees hired shall not work in unsupervised positions until they have completed the training program required herein;
 - (5) Facility personnel shall take part in a planned annual review of the initial training program; and
 - (6) Training records that document the type and amount of training received by current facility personnel shall be kept until closure of the facility. Training records on former employees shall be kept for at least one year from the date the employee last worked at the facility.
- (q) The following actions shall be implemented in the case of an emergency:
- (1) The plant operator or emergency coordinator shall immediately identify the character, exact source, amount and extent of any discharged materials and notify appropriate State or local agencies with designated response roles if their help is needed;
 - (2) Concurrently, the plant operator or emergency coordinator shall assess possible hazards to public health or the environment that may result from the discharge, fire or explosion. This assessment shall consider both direct and indirect effects;
 - (3) If the plant operator or emergency coordinator determines that the facility has had an uncontrolled discharge, a discharge above standard levels permitted by the Department, or a fire or explosion, he or she shall:
 - (i) Immediately notify appropriate local authorities if an assessment indicates that evacuation of local areas may be advisable;
 - (ii) Immediately notify the Department at 1-877-WARNDEP; and
 - (iii) When notifying the Department, report the type of substance and the estimated quantity discharged, if known, the location of the discharge, the action the person reporting the discharge is currently taking or proposing to take in order to mitigate the discharge and any other information concerning the incident which the Department may request at the time of notification.
 - (4) The plant operator shall take all reasonable measures to ensure that fires, explosions and discharges do not recur or spread to other areas of the facility. These measures shall include, where applicable, the cessation of process operations and the collection and containment of released waste;

- (5) Immediately after an emergency, the plant operator or emergency coordinator shall provide for treating, storing or disposing of waste contaminated soil or water or any other material contaminated as a result of the discharge, fire or explosion;
- (6) The plant operator or emergency coordinator shall insure that no waste is processed until cleanup procedures are completed and all emergency equipment listed in the contingency plan is again fit for its intended use;
- (7) The plant operator or emergency coordinator shall notify the Department and appropriate local authorities when operations in the affected areas of the facility have returned to normal; and
- (8) Within 15 days after the incident, the plant operator or emergency coordinator shall submit a written report on the incident to the Department. The report shall include, but not be limited to:
 - (i) The name, address and telephone number of the facility;
 - (ii) The date, time and description of the incident;
 - (iii) The extent of injuries, if applicable, with names and responsibilities indicated;
 - (iv) An assessment of actual damage to the environment, if applicable;
 - (v) An assessment of the scope and magnitude of the incident;
 - (vi) A description of the immediate actions that have been initiated to clean up the affected area and prevent a recurrence of a similar incident; and
 - (vii) An implementation schedule for undertaking measures to effect cleanup and avoid recurrence of the incident, if applicable.

3. General Operating Requirements for Regulated Medical Waste Destination Facilities

- (a) Pursuant to N.J.A.C. 7:26-3A.1(c), the permittee shall comply with N.J.A.C. 7:26-3A.1 *et seq.*
- (b) Pursuant to N.J.A.C. 7:26-3A.4(a), the length of time that the permittee shall keep records required under N.J.A.C. 7:26-3A is automatically extended in the case where EPA, the Department or another State agency initiates an enforcement action, for which those records are relevant, until the conclusion of the enforcement action.
- (c) Pursuant to N.J.A.C. 7:26-3A.4(b), all records, reports, logs and tracking forms required to be made and/or kept in accordance with N.J.A.C. 7:26-3A, shall be made available for inspection by the Department.
- (d) Pursuant to N.J.A.C. 7:26-3A.9, the supervisory personnel of the small scale thermal destruction facility that is the subject of this permit shall attend education and training sessions provided by the Department, and shall also be required to disseminate the information obtained at the sessions to all employees.
- (e) Storage of regulated medical waste shall be in conformance with N.J.A.C. 7:26-3A.12.
- (f) Pursuant to N.J.A.C. 7:26-3A.16(a) the permittee shall determine if waste is a regulated medical waste.
- (g) The permittee shall comply with the record keeping requirements at N.J.A.C. 7:26-3A.25.
- (h) The permittee shall comply with the reporting requirements at N.J.A.C. 7:26-3A.26.

End of Section II

Section III - Specific Conditions Applicable to the Facility

1. Permitted Waste Types

The permittee is authorized to accept the following waste type and the following regulated medical waste classes originating from the Morristown Memorial Hospital campuses, located in the municipality of Morristown:

<u>ID</u>	<u>Description</u>
10	Municipal Waste (exclusively limited to institutional waste subcategory)
Regulated Medical Waste	Classes 1,2,3,4,5,6 and 7

The permittee is not authorized to accept any other type or description of solid waste as defined at N.J.A.C. 7:26-2.13(g) and (h), regulated medical waste as defined at N.J.A.C. 7:26-3A.6(a), or hazardous waste as defined at N.J.A.C. 7:26G-1 *et seq.*

2. Approved Designs, Plans and Reports

- (a) The permittee shall operate the facility, and construct or install associated appurtenances thereto, in accordance with the provisions of N.J.A.C. 7:26-1 *et seq.*, the conditions of this permit, and the following permit application documents which are incorporated herein by reference:

- (1) "Morristown Memorial Hospital Small-Scale Medical Waste Incinerator - Application for Solid Waste Facility Permit", prepared by Paulus, Sokolowski & Sartor, Inc., dated September, 1990, signed and sealed by John T. Bolan, P.E., which includes the following:

- "Tax Map - Town of Morristown" - Sheet N. 42, dated April, 1985
- "Morristown Zoning Map", dated April 1979 with latest revision dated September, 1988
- "Mechanical Systems Addition Courtyard and East Drive Access Road" - Figure 4-1, dated 5/16/90
- "On-site Traffic Flow Solid Waste Vehicles" - Figure 4-2, dated 5/1/90
- "Essex Skip Hoist Dumper #CD6-3672-246S" - Drawing No. D-5670-1, dated 7/27/90
- "Equipment Arrangement Plan at Level D (elev. 327'-0")" - Drawing No. D0104-00001D, dated 12/16/89
- "Equipment Arrangement Plan Above Level D" - Drawing No. D0104-00002D, dated 12/15/89
- "Equipment Arrangement Elevation" - Drawing No. D0104-00003D, dated 12/18/89
- "Process Flow Diagram" - Drawing No. D0104-00010D-B, dated

2/23/90

- "P & I Diagram" - Drawing No. D0104-00020D-C, dated 1/10/90
- "P & I Diagram" - Drawing No. D0104-00021D-C, dated 1/9/90
- "P & I Diagram" - Drawing No. D0104-00022D-B, dated 1/9/90
- "P & I Diagram for Primary Burner" - Drawing No. D0104-00023D-B, dated 1/11/90
- "P & I Diagram for Secondary Burner" - Drawing No. D0104-00024D-B, dated 1/11/90
- "Flow Diagram Incinerator Stack Monitoring System" - Drawing No. C/AE - 21172, dated 3/26/90;

(2) Correspondence dated November 19, 1992, directed to Mr. Max Friedman of the Division of Environmental Quality of the NJDEP, prepared by Mr. Gerard Hyland of Paulus, Sokolowski and Sartor, Inc. on behalf of Morristown Memorial Hospital, requesting permit amendment to allow for the use of activated carbon injection system for mercury control;

(3) "Morristown Memorial Hospital Small-Scale Medical Waste Incinerator - Operations and Maintenance Manual", dated September 1992. Prepared by Paulus, Sokolowski and Sartor, Inc., which includes the following informational drawings:

- "Equipment Arrangement Plan at Level 'D' (Elev. 327'-0") - Drawing No. D0104-00001DD - ThermAll
- "Equipment Arrangement Plan Above Level 'D'" - Drawing No. D0104-00002Da - ThermAll
- "Equipment Arrangement Elevation" - Drawing No. D0104-00003Da - ThermAll
- "Process Flow Diagram" - Drawing No. D0104-00010D-B - ThermAll
- "P & I Diagram (for Ram Feeder, PCC, and SCC)" - Drawing No. D0104-00020D-C - ThermAll
- "P & I Diagram (for Spray Dryer)" - Drawing No. D0104-00021D-C - ThermAll
- "P & I Diagram (for Bag House)" - Drawing No. D0104-00022D-B - ThermAll
- "P & I Diagram for Primary Burner" - Drawing No. D0104-00023D-B - ThermAll
- "P & I Diagram for Secondary Burner" - Drawing No. D0104-00024D-B - ThermAll
- "P & I Diagram (feed system)" - Drawing No. D0104-00025D-2 - ThermAll
- "I.D. Fan Exhaust Duct" - Drawing No. D0104-30204Da - ThermAll
- "Primary Combustion Chamber Piping Rack" - Drawing No. D0104-4---D - ThermAll
- "Secondary Combustion Chamber Piping Rack" - Drawing No. D0104-400001D - ThermAll
- "Process Supply Diagram" - Drawing No. D0104-400003D-A - Thermall

- "P.C.C. Burner Piping Diagram" - Drawing No. D0104-40004D-A - ThermAll
 - "S.C.C. Burner Piping Diagram" - Drawing No. D0104-40005D-A - ThermAll
 - "Schematic Wiring Diagram - Primary Combustion Chamber Flame Safety Control" - Drawing No. D0104-50014D-1 - ThermAll
 - "Schematic Wiring Diagram - Secondary Combustion Chamber Flame Safety Control" - Drawing No. D0104-50015D-1 - ThermAll
 - "Layout & Details - Local Burner Panel (P.C.C.)" - D0104-50031D-A - ThermAll
 - "Wiring Diagram - Local Burner Panel (P.C.C.)" - Drawing No. D0104-50032D-1 - ThermAll
 - "Layout & Details - Local Burner Panel (P.C.C.)" - Drawing No. D0104-50033D-A - ThermAll
 - "Wiring Diagram - Local Burner Panel (S.C.C.)" - Drawing No. D0104-50034D-1 - ThermAll
 - "O&MD Incinerator Stack Monitoring System" - Drawing No. 773522 - Rosemount
 - "316 Stainless Steel Sample Probe with Baffled Filter" - Drawing No. B/AE-21177 - Rosemount
 - "Flow Diagram Incinerator Stack Monitoring System" - Drawing No. C/AE-21172 Rosemount
 - "Interconnect Wiring Diagram - Stack Gas System" - Drawing No. 773523 Sh 1/2 - Rosemount
 - "Interconnect Wiring Diagram - Stack Gas System" - Drawing No. 773523 Sh 2/2 - Rosemount
 - "Calibration Valve Assembly" - Drawing No. 773465 - Beckman
 - "Essex Skip Hoist Dumper" Drawing No. D-5670-1 Essex;
- (4) "Medical Waste Incinerator Small-Scale Solid Waste Facility Permit Renewal Application", dated May 1996, prepared for Morristown Memorial Hospital by Paulus, Sokolowski and Sartor, Inc.;
- (5) "Response to Comments" letter, dated 12/4/96, from Gerard V. Faloon, Director of Operations for Morristown Memorial Hospital to Robert Confer, Chief of the Bureau of Resource Recovery & Technical Programs; and
- (6) Letter dated 2/20/97, from Gerard V. Faloon, Director of Operations for Morristown Memorial Hospital to Robert Confer, Chief of the Bureau of Resource Recovery & technical Programs.

In case of conflict, the provisions N.J.A.C. 7:26-1 *et seq.* shall have precedence over the conditions of this permit, the conditions of this permit shall have precedence over the SWF permit application documents listed above, and the most recent revisions and supplemental information approved by the Department shall prevail over prior submittals and designs.

- (b) One complete set of the permit application documents listed in Condition 2(a) above,

this Solid Waste Facility Permit, and all records, reports and plans as may be required pursuant to this permit shall be kept on site and shall be available for inspection by authorized representatives of the Department upon presentation of credentials.

3. Approved Operations

(a) Waste Processing Rates

The facility shall process waste at a rate that does not exceed 780 pounds per hour.

(b) Hours of Operation

The delivery and/or processing of waste at the facility shall be limited to the following schedule:

Monday through Sunday, 24-Hours Daily

(c) Housekeeping

Routine housekeeping and maintenance procedures shall be implemented within the facility interior to prevent the excess accumulation of dust and debris, and to maintain general cleanliness in the working environment. Unprocessed waste feedstock and facility process waste residues shall be stored in containers as specified in the referenced engineering plans listed at Condition 2 of this section. All facility floor drains, traps, sumps or similar catchment basins shall be maintained free of obstructions to facilitate effluent drainage.

4. Residue Management

(a) Process Residue Handling and Storage

Upon the completion of a combustion cycle, bottom ash residue collected in the container positioned below the rotary kiln to receive the residue, shall be wetted and allowed to cool before it is removed to lined corrugated boxes for subsequent handling and transport. Upon filling, the bottom ash box containers shall be sealed and labeled identifying the contents, and shall then be placed on a pallet located within the incinerator building. When the pallet is filled, the pallet and its contents shall be removed and placed into a gated and enclosed roll-off container located in the exterior courtyard adjacent to the incinerator building. The fly ash residue, generated by the operation of the air pollution control equipment, is to be discharged directly into lined corrugated collection boxes located below the control equipment. Upon filling, the collection container shall be sealed and labeled regarding its contents, and shall be subsequently handled in a separate but procedurally identical manner to that described for the bottom ash residue stream.

Ash residues generated by the facility's operation shall be thoroughly extinguished to eliminate any fire hazard, and shall be handled in such a manner as to prevent fugitive

dust and spillage. Ash residue containers shall not be filled to levels that permit overflow or spillage during handling, while in storage, or during transport for disposal. Ash residue containers shall be covered during transport to prevent spillage or scattering by wind.

(b) Residual Ash Monitoring Program

A residual ash monitoring program shall be maintained by the permittee for the purpose of assessing the chemical characteristics of the ash residue generated by facility operations. Material sampling methods, sample preservation requirements, sample handling times and decontamination procedures for field equipment shall conform to applicable industry methods as specified in the NJDEP "Field Sampling Procedures Manual." Other methods may be used on written approval from the Division of Solid and Hazardous Waste. As a minimum, this monitoring program shall consist of the following:

- (1) Analyses shall be conducted in accordance with the following schedule:

<u>TIME PERIOD</u>	<u>ANALYSIS:</u>	
	<u>Toxicity Characteristic Leaching Procedure</u>	<u>Total TCDD's</u> (17 2,3,7,8-substituted PCDD and PCDF Congeners)
Confirmatory	Separate sampling and analysis of bottom ash and fly ash residue, as described below	Separate sampling and analysis of bottom ash and fly ash during any stack-testing event conducted for dioxins, as described below
Re-Characterization	As Required / Parameter Specific	N/A

- (2) For purpose of analysis, the residual ash generated by the facility shall be sampled in accordance with the following procedures:

(i) **TOXICITY CHARACTERISTIC LEACHING PROCEDURE SAMPLING:**

- (A) Bottom ash generated by facility operation (that residue collected from the rotary kiln), shall be sampled in accordance with the following protocol:

With the completion of each unit combustion cycle, and after the bottom ash as sufficiently cooled to allow safe handling, a random sample of sufficient size shall be collected from the bottom ash container located below the rotary kiln. The random bottom ash

samples collected over a three-month period of time shall collectively be used to form a quarterly composite sample. In doing so, the individual random samples shall be thoroughly mixed to form the quarterly bottom ash composite sample as a preparatory step to analysis. As a minimum, four (4) discrete subsamples or replicates of the quarterly bottom ash composite sample formed shall be generated from the composite whole. Each of the four (4) discrete replicate or subsamples shall be subject individually to analysis for: arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver as prescribed for the Toxicity Characteristic Leaching Procedure as is referenced at (1) immediately above.

- (B) Fly ash generated by the operation of the facility's air pollution control equipment, shall be sampled in accordance with the following protocol:

Upon the filling of each lined container used to collect facility fly ash, a random sample of sufficient size shall be gathered from the container before it is sealed. The container samples collected over a three-month period shall then be thoroughly mixed to form a quarterly fly ash composite sample as a preparatory step to analysis. As a minimum, four (4) discrete subsamples or replicates of the quarterly fly ash composite sample formed shall be generated from the composite whole. Each of the four (4) discrete replicate or subsamples shall be subject individually to analysis for: arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver as prescribed for the Toxicity Characteristic Leaching Procedure as is referenced at (1) immediately above.

(ii) **STACK-TESTING EVENT – DIOXIN ANALYSIS SAMPLING:**

- (A) During any stack-testing event measuring dioxin emissions to the atmosphere, representative sample(s) of the bottom ash generated over the full term of the stack test shall be collected. Sample(s) shall be collected from the bottom ash container located below the rotary kiln. A composite sample representative of the bottom ash generated during the stack-testing event shall be prepared by combining all samples collected during the stack-testing event into a single, composited sample. This sample shall be subject to analysis as prescribed for Total TCDD's as is referenced at (1) above.
- (B) During any stack-testing event measuring dioxin emissions to the atmosphere, representative sample(s) of the fly ash generated over the full term of the stack test shall be collected. Sample(s) shall be collected from the fly ash collection container positioned below the air pollution control equipment train. If multiple samples are collected, a composite sample representative of the fly ash

generated during the stack-testing event shall be prepared by combining all samples collected during the stack-testing event into a single, composited sample. This sample shall be subject to analysis as prescribed for Total TCDD's as is referenced at (1) immediately above.

- (3) A new ash residue characterization shall be initiated if:
 - (i) there is a significant change in facility processes and/or operations;
 - (ii) there is a significant change in the type of waste(s) received for disposal at the facility; or
 - (iii) the results of the confirmatory analyses demonstrate that one or more of the parameters exceed the Toxicity Characteristic Leaching Procedure regulatory limits.
- (4) Re-characterization analysis will be parameter-specific in the instance where the analysis indicates concentrations in the sample extract are above the defined regulatory threshold for that parameter, resulting in the waste residue requiring reclassification as a hazardous waste. Otherwise, analysis will include the full spectrum of listed TCLP parameters. Ash residue subject to re-characterization shall be sampled in accordance with procedures outlined in (2) immediately above, or shall be in accord with a revised sampling protocol set forth by the permittee and approved by the Department. During a residue re-characterization period, all ash residue generated shall be stored on-site until the analytical results are received, and a determination is rendered on the hazardous or non-hazardous nature of the material. At the completion of the re-characterization test period, the confirmatory ash residue sampling and analysis regimen outlined above, shall not be re-instituted without express written approval from the Division of Solid and Hazardous Waste.
- (5) All analyses called for as a condition of this permit shall be performed by a laboratory approved, and/or certified by the Department for those specific analyses. The permittee shall submit each set of analytical results, with the appropriate statistical analysis, to the Division of Solid and Hazardous Waste upon the receipt of said results.

(c) Ash Residue Removal

All truck bodies or containers used to remove ash residue from the facility site shall be sealed to prevent leakage and shall not be filled to levels that permit overflow or spillage during transport. The ash residue removal vehicles (truck bodies and/or containers) shall be covered to prevent spillage or scattering by wind during transport. Ash residue removal vehicles shall leave the facility promptly after being loaded. Exterior storage of ash residue in loaded trucks is prohibited. Container loading shall be conducted solely within the confines of the adjacent courtyard in a controlled manner that minimizes dusting and prevents the tracking of ash to the exterior of the building. Truck tires of container transport vehicles shall be inspected and, if necessary to prevent the tracking of ash onto local roads, shall be

washed and/or brushed clean before the truck leaves the facility site.

5. Operations Records

In addition to the operating record and reporting requirements of Condition 8 of Section I of this permit and of Condition 3 of Section II of this permit, the permittee shall maintain the following records of facility operations on a daily basis:

- (a) The quantity (by weight) of waste charged to the incinerator for each hour of operation.
- (b) The daily total weight of waste and RMW incinerated for each day of facility operation; and
- (c) The quantity (by weight) of bottom ash and fly ash transported off site for disposal on any given day. Include the date of transport, the name, address and NJDEP registration number of the transporter, and the name and address of the disposal facility that receives the ash.

End of Section III